

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

RECEIVED
JUL 10 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of:

Wireless Information Networks Forum
Petition for Rulemaking To Allocate
the 5.1 - 5.35 GHz Band and Adopt
Service Rules for a Shared Unlicensed
Personal Radio Network

RM-8648

DOCKET FILE COPY ORIGINAL

Apple Computer, Inc. Petition for
Rulemaking To Allocate Spectrum in
the 5 GHz Band To Establish a Wireless
Component of the National Information
Infrastructure

RM-8653

COMMENTS OF MOTOROLA, INC.

Motorola, Inc. ("Motorola") herewith submits its comments in support of the above-captioned petitions for rulemaking of Wireless Information Networks Forum ("WINForum") and Apple Computer, Inc. ("Apple")¹. As both of these

¹ Wireless Information Networks Forum Petition for Rulemaking To Allocate the 5.1 - 5.35 GHz Band and Adopt Service Rules for a Shared Unlicensed Personal Radio Network, RM-8648 (filed May 15, 1995) ("WINForum Petition"); Apple Computer, Inc. Petition for Rulemaking To Allocate Spectrum in the 5 GHz Band To Establish a Wireless Component of the National Information Infrastructure, RM-8648 (filed May 24, 1995) ("Apple Petition"). Although the WINForum petition was placed on public notice on May 24, 1995, see Petitions for Rulemaking Filed, Report No. 2074 (May 24, 1995), the Commission on its own motion extended the time for filing comments on the WINForum Petition in view of the Apple Petition. See Order, RM-8648, DA 95-1254 (June 8, 1995). Accordingly, comments are to be filed on July 10, 1995 and July 25, 1995.

No. of Copies rec'd at 4
List ABCDE OET

petitions note, there is a growing need within the United States for additional unlicensed radio spectrum to accommodate existing and future needs that are not currently met by licensed services or existing unlicensed radio allocations. In particular, the advent of multimedia technology has created a need for high-speed local area and ad hoc networking for wireless computing. Motorola accordingly urges the Commission to expeditiously adopt a Notice of Proposed Rule Making to allocate spectrum in the 5 GHz band for such use.

DISCUSSION

Motorola, through its participation in WINForum, assisted in the development of the Shared Unlicensed PErsonal Radio Network ("SUPERNet") petition for rulemaking. This petition was finalized and filed with the Commission on May 15, 1995. A little over a week later, Apple filed a second petition for rulemaking seeking a very similar allocation for a National Information Infrastructure connectivity. Both of these petitions share highly important characteristics:

- Both petitions seek an allocation of spectrum to support high-speed computer-to-computer operations (20-24 megabits/second) capable of meeting the needs of multimedia, voice, and high speed data;
- Both petitions view unlicensed operation as critical to meeting the needs of wireless data users;
- Both petitions seek an a similar size allocation (250-300 MHz) of spectrum in the 5 GHz band, with an overlap of 150 MHz in the 5.15-5.30 GHz band;

- Both petitions appear to be based upon a model of low power packet-switched operation with a spectrum "etiquette" to be developed by an industry consensus committee;
- Both petitions conceptually appear to conclude that the European High PERFORMANCE Local Area Network ("HIPERLAN") is a suitable starting point for a domestic 5 GHz wideband allocation, although only as a "minimal" specification; and,
- Both petitions agree that, in view of European HIPERLAN developments, any delay in initiating a spectrum allocation for unlicensed, wideband data devices could have detrimental consequences for domestic competitiveness in international computer and telecommunications equipment markets.

Motorola concurs with all of these points and urges the Commission to expeditiously adopt a notice of proposed rulemaking consistent with the basic framework set forth in the petitions.

Motorola has been, and continues to be, a strong supporter of unlicensed allocations for computer-to-computer communications. Motorola, for example, was an advocate of the recent allocation of spectrum for unlicensed personal communications service devices, and has participated in technical and microwave relocation industry committees to ensure the success of the new allocation. However, given the careful deliberation necessary for new spectrum allocations in the United States, Motorola and others believe it is timely to begin the process of allocating spectrum for the next generation of unlicensed devices. Motorola expects that, with the increasing use of multimedia technologies, the spectrum

currently available for unlicensed operations will be insufficient to accommodate the demand for larger blocks of information at faster and faster speeds.

The 5 GHz band appears to be ideal for the next generation of computer-to-computer communications. There is a significant amount of spectrum that could be made available with the transition from aeronautical microwave landing systems ("MLS") to differential GPS to support high data rate communications. Unlike higher bands, the 5 GHz frequencies also appear to be commercially feasible given the anticipated state of the art for next generation unlicensed devices.²

As both petitions observe, Europe has already begun the process of allocating spectrum for, and defining, next generation unlicensed products. In particular, CEPT has allocated spectrum for HIPERLAN and recently published an initial proposal for a HIPERLAN protocol. If domestic companies are to compete for worldwide radio LAN markets, and if domestic users are to reap the competitive benefits of wireless, multimedia computer applications, it is critical for the U.S. to take similar steps.

² Motorola notes that the Commission has also recently proposed the use of above 40 GHz frequencies for computer-to-computer communications. Motorola, like many others in the industry, support the reservation of frequencies in higher bands for additional unlicensed uses in the future. At present, however, the above 40 GHz frequencies do not appear to be commercially viable for the next generation of unlicensed products.

For the foregoing reasons, Motorola urges the Commission to adopt a notice of proposed rulemaking to allocate spectrum in the 5 GHz band for wideband computer-to-computer communications. If the country's wireless offerings are to continue to evolve to meet the growing multimedia needs of wireless computer users, timely, forward-looking action is necessary.

Respectfully submitted,

MOTOROLA INC.

By: Stuart Overby
Stuart Overby
Motorola Inc.
1250 Eye Street, N.W.
Suite 400
Washington, D.C. 20005
(202) 371-6940

Dated: July 10, 1995

Michael Senkowski
Eric DeSilva
WILEY, REIN & FIELDING
1776 K Street, N.W.
Washington, D.C. 20006

Henry Goldberg
Mary Dent
GOLDBERG, GODLES, WIENER & WRIGHT
1229 19th Street, N.W.
Washington, D.C. 20036

Ruth Milkman
Federal Communications Commission
Office of the Chairman
1919 M Street, N.W.; Rm 814
Washington, D.C. 20554

Mark Corbitt
Federal Communications Commission
Office of Plans & Policies
1919 M Street, N.W.; Room 822
Washington, D.C. 20554

Bruce Franca
Federal Communications Commission
Office of Engineering & Technology
2000 M Street, N.W.
Washington, D.C. 20554

Mike Marcus
Federal Communications Commission
Office of Engineering & Technology
2000 M Street, N.W.
Washington, D.C. 20554

Charles Iseman
Federal Communications Commission
Office of Engineering & Technology
2000 M Street, N.W.
Washington, D.C. 20554